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A GUIDE TO EARLY CHILDHOOD DEVELOPMENTAL SCREENING



By Samuel J. Meisels, Ed.D.

MASSACHUSETTS DEPARTMENT OF EDUCATION
DIVISION OF SPECIAL EDUCATION
EARLY CHILDHOOD PROJECT

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A GUIDE TO EARLY CHILDHOOD DEVELOPMENTAL SCREENING

MASSACHUSETTS DEPARTMENT OF EDUCATION
DIVISION OF SPECIAL EDUCATION
EARLY CHILDHOOD PROJECT

Ву

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Dear Colleague:

This document represents the first in a series of Early Childhood publications to be developed by the Early Childhood Project, sponsored by the Massachusetts Department of Education, Division of Special Education and the Office of Special Education, U.S. Department of Education.

Chapter 766 of the Acts of 1972: Massachusetts Comprehensive Special Education Law and Public Law 94-142: The Education for all Handicapped Children Acts of 1975 require the identification and evaluation of all children with special needs.

As the Early Childhood Project began its efforts to identify and meet the needs of local school systems. the organization of a screening system, appropriate instruments to use for screening, and the purpose and use of screening data to assist in the identification of young children with special needs were found to be confusing and unclear to many who work with these children. Based upon this expressed need, a series of workshops on developmental screening was conducted in the spring of 1977. A Guide to Early Childhood Developmental Screening was designed as an instructional tool to use during the workshops. This guide was critiqued by the workshop participants and many valuable and helpful recommendations were incorporated into the final edition. A special thanks also goes to the Early Childhood Regional Specialists for their assistance in reviewing and critiquing the final document.

Dr. Meisels and the Early Childhood staff trust this guide will clarify some of the issues related to screening of young children, as a first step toward assessment and the delivery of services to young children with special needs.

Sincerely,

Roger W. Brown Associate Commissioner

TABLE OF CONTENTS

1. 1	NT	RODUCTORY QUESTIONS	1
	A.	What is early childhood developmental screening?	3
	B.	What is the rationale for early childhood screening?	5
	C.	What is the difference between screening and evaluation?	5
	D.	Is developmental screening different from readiness testing?	6
II.	SPE	ECIFIC ISSUES	7
	A.	What are the components of an early childhood screening program?	9
	B.	When should screening take place?	10
	C.	What is reliability and validity?	10
	D.	What decisions must be made when selecting a	
		developmental screening instrument?	12
Ш.	PR	ACTICAL CONSIDERATIONS	15
	A.	What type of follow-up and programmatic decisions can	
		be made on the basis of screening?	17
	B.	Should parents be included in the screening process?	18
	C.	What are some of the costs of an early childhood screening program?	18
	D.	What are the limitations of early childhood screening instruments?	19
IV.	AP	PENDIXES	21
	A.	Annotated Bibliography	22
	B.	What Chapter 766 Says About Screening	24
	C.	Sample Flow Chart for Conducting Physical Examinations	26
	D.	Vision and Hearing Screening	27
	E.	Feedback to Parents Following Screening	29
	F.	Sample Parent Questionnaire	30
	G.	Local Newspaper Coverage of Screening Programs	36
	H.	A Selection of Screening Instruments	37



I. INTRODUCTORY QUESTIONS



	CHILDFIND	SCREENING	EVALUATION	INDIVIDUAL PROGRAM PLANNING
PURPOSE	Initial contact and awareness	To identify chil- dren who may need further evaluation	To determine existence of disability and to propose possible remediation strategies	To determine individual educational plan, program placement and curriculum activities
PERSONNEL	State Personnel, School Staff, Volunteers, Com- munity Members, Pediatricians	Teachers, Other Professionals and Paraprofessionals, Parents	Educators, Psychologists, Parents, Clini- cians, Physicians, Social Workers	Teachers, Par- ents, Core Team Personnel, Other Professionals
ACTIVITIES	Census taking, newspaper and media publicity, posters, leaflets	Administration of screening instruments, medical examinations, hearing and vision testing, and parent questionnaire	Formal evalua- tions, parent conferencing, core evaluation team meetings	Informal evalua- tion, development of instructional objectives

Figure 1. The relationship of screening to identification, evaluation and intervention procedures.

I. INTRODUCTORY QUESTIONS

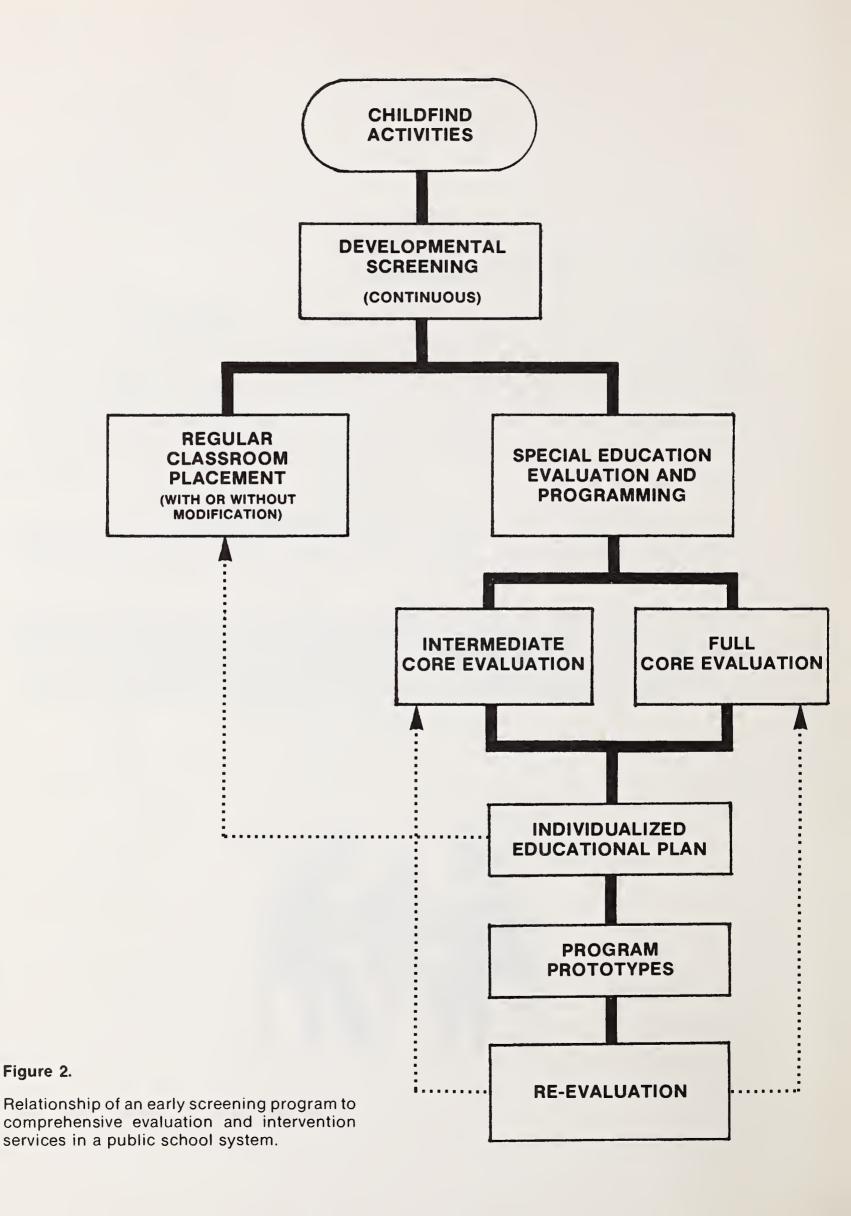
A. WHAT IS EARLY CHILDHOOD DEVELOPMENTAL SCREENING?

Early childhood developmental screening is a brief assessment procedure designed to identify children who may need further evaluation and educational intervention. Screening serves as the first step in an evaluation and intervention process that is intended to assist children in achieving their maximum potential. A developmental screening instrument surveys a child's abilities in areas such as language functioning, reasoning, gross motor, fine motor/adaptive and personal-social development. The intent of early childhood screening is to determine quickly and efficiently whether there is a high risk that a child might not succeed in school unless (s)he receives special educational or medical services.

Screening is only the initial phase of an educational assessment. For children who are suspected of having learning problems, it is followed by evaluation and subsequently by specific intervention or remediation. **Figure 1** places screening into context with other identification and assessment procedures.

This guide focuses on children three to six years of age. The regulations regarding screening are detailed in the Massachusetts Comprehensive Special Education Law, Chapter 766 (see **Appendix B**), and in Public Law 94-142, the Education for All Handicapped Children Act. The purpose of this document is to elaborate on these regulations and to identify some of the critical issues and practical components that play a role in the development of exemplary early screening programs.





B. WHAT IS THE RATIONALE FOR EARLY CHILDHOOD SCREENING?

Early childhood screening should be performed in order to identify children who might profit from early educational intervention or from medical treatment. Screening can be utilized preventively, to identify the potential existence of a problem or disability in a child at a very early stage. Many chronic conditions, such as vision and hearing problems, are characterized by long "silent periods" that precede the point when symptoms become apparent. Screening serves as a means for uncovering these conditions during the silent period or during the initial symptomatic phase.

In general, screening is based on the premise that a child's skills and intelligence are not fixed or immutable. Studies* have shown that early intervention can change significantly a child's abilities and developmental potential. When developmental screening is included as part of a comprehensive system of evaluative and programmatic options, it should contribute to reducing the number of children who experience failure and who need special services in later school years.

C. WHAT IS THE DIFFERENCE BETWEEN SCREENING AND EVALUATION?

Compared to evaluation, screening is a limited procedure. Screening can only indicate that a child **may** have a disability. It cannot definitively describe the nature and extent of a handicap or disability. Indeed, screening must be followed by evaluation in order to confirm or disconfirm the suspicions raised by a screening procedure. Thus, screening tests are used to select children who may possibly have special needs; evaluative instruments are used to identify those children who specifically have special needs.

Children who have obvious and severe handicapping conditions do not have to participate in screening. These children can usually be identified during the initial referral or child find process, and can enter the evaluation phase immediately.

Screening should not be used to label children, nor should it be used to develop intervention procedures. It is only through comprehensive evaluation that the existence of a handicapping condition can be determined definitively, that an individual educational plan can be developed, and the most appropriate services can be specified. **Figure 2** represents the relationship of an early screening program to comprehensive evaluation and intervention services in a public school system.

^{*}See, for example:

Bronfenbrenner, U., Is early intervention effective? Report on longitudinal evaluation of preschool programs. Vol. 2. Office of Child Development. Washington, D.C.: U.S. Department of Health, Education and Welfare, 1974.

Caldwell, B.M., The rationale for early intervention. Exceptional Children, 1970, 36 (10), 717-725.

Hunt, J.McV., Intelligence and Experience. New York: Ronald Press, 1961.

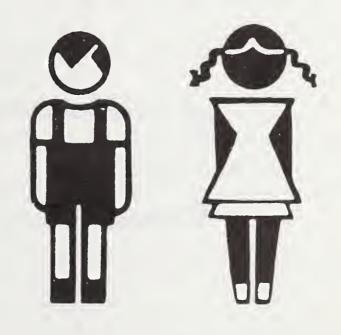
D. IS DEVELOPMENTAL SCREENING DIFFERENT FROM READINESS TESTING?

Although some of the individual items that appear on readiness tests are identical or are similar to those included on screening instruments, the two procedures serve different purposes. Screening instruments are designed to identify children who may have a handicapping condition that could affect their potential for learning. Developmental screening focuses on a child's growth in a number of key areas, such as language development, large and small muscle control, eye-hand coordination, and the development of reasoning and number skills. Screening surveys a child's general ability to acquire skills.

In contrast, readiness tests are designed to identify a child's relative preparedness for enrolling in a certain academic program. Readiness tests focus on current skill achievement and performance, rather than on a child's developmental potential. Thus, a child who performs poorly on a readiness test may only be displaying a lack of general knowledge, rather than a possible impairment which might eventually limit his or her ability to acquire knowledge.



II. SPECIFIC ISSUES



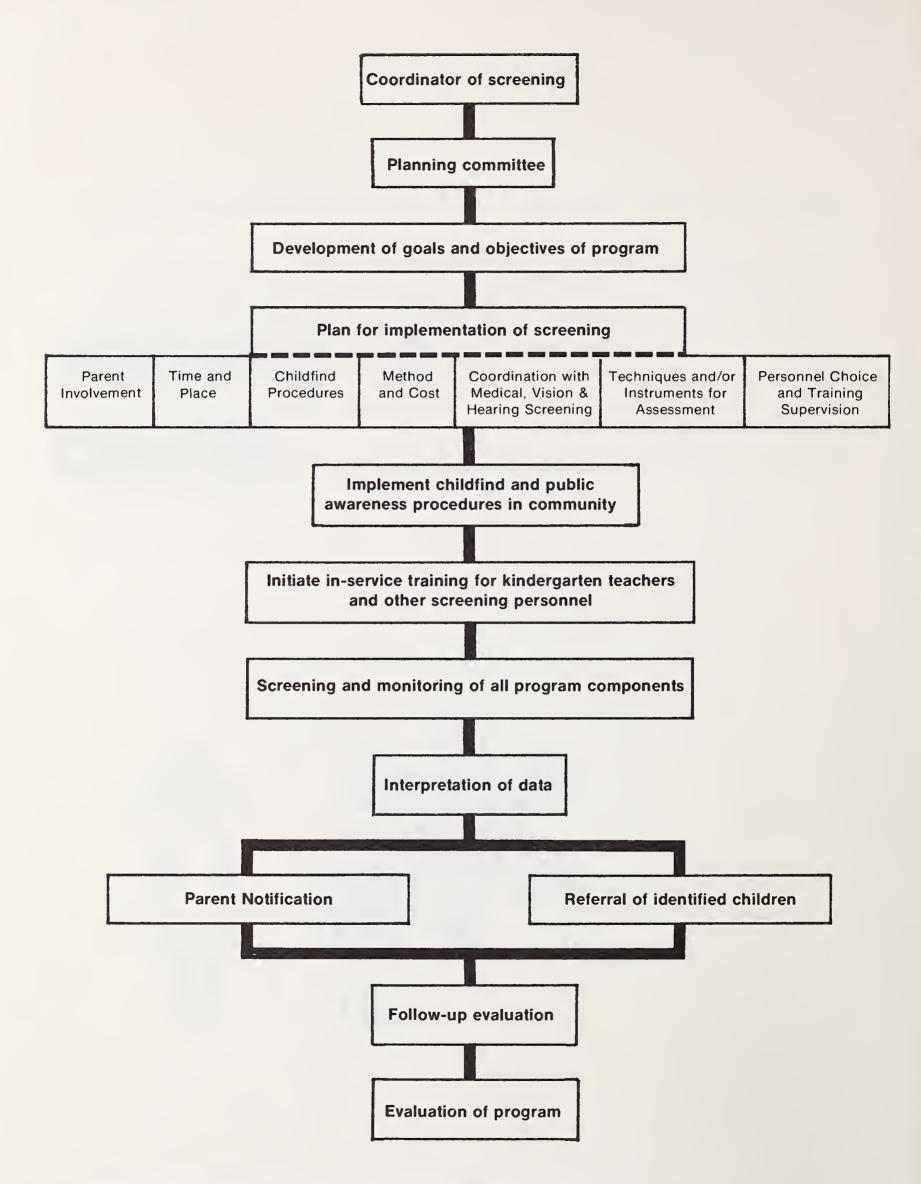


Figure 3. Components of an early childhood screening program.

II. SPECIFIC ISSUES

A. WHAT ARE THE COMPONENTS OF AN EARLY CHILDHOOD SCREENING PROGRAM?

Screening programs are composed of a variety of distinct components or elements, each of which requires advance planning. Before initiating a screening program, several decisions regarding these components have to be made. These decisions include:

- 1. Identification of a coordinator of screening;
- 2. Selection of a committee to assist in the planning and implementation of the screening program;
- 3. Specification of the purposes and objectives of the screening program;
- 4. Determination of the population to be screened;
- 5. Selection of screening instrument(s) and procedure(s) to be followed;
- 6. Arrangement for appropriate physical locations and timing for screening;
- 7. Coordination of medical examinations and vision and hearing tests with developmental screening;
- 8. Implementation of methods to locate children who are to be screened and initiation of community awareness program;
- 9. Selection and training of screening personnel;
- 10. In-service training for kindergarten teachers;
- 11. Implementation of the screening program, including solicitation of information from parents and monitoring of all program components;
- 12. Notification of all parents regarding results of screening;
- 13. Notification of evaluation teams concerning the need for follow-up on individual children; and,
- 14. Evaluation of effectiveness of the screening program.

Subsequent to screening, all children who are referred should receive follow-up evaluation and, if indicated, appropriate intervention.

Figure 3 presents the screening components in diagram format. In order to develop an effective screening program, each step illustrated in the flow chart should be carefully considered.

B. WHEN SHOULD SCREENING TAKE PLACE?

Screening should take place as early as possible and as soon as it is appropriate in a child's life. Moreover, according to Chapter 766, screening should occur on a continuous basis. For screening to be worthwhile, it must take place while there is still opportunity for the child to benefit from early intervention. The earlier screening takes place, the more time there is in which the intervention system can prepare to meet the needs of children found to have special needs.

Traditionally, screening and identification of developmental and learning problems has taken place at the point of school entry, namely in the fall of the child's kindergarten or first grade year. If screening takes place earlier than fall school entry, specifically in the spring of the year preceding kindergarten entry, or even when the child is three years old, the child will have a greater likelihood of receiving prompt evaluation and early intervention.

The amount of time that the evaluation can be advanced as a result of early screening defines the concept of **lead time** for planning necessary services. The longer the lead time the greater the period during which a handicapping condition can be detected. The critical feature to be noted is that screening should only take place while there still remains time to act effectively on the results of the screening procedure.

C. WHAT IS RELIABILITY AND VALIDITY?

Reliability and validity refer to statistical procedures that indicate whether or not an instrument measures what it purports to measure. Reliability and validity procedures should be carried out by the developers of a screening instrument. In order to make informed decisions when selecting a screening instrument, it is important to understand the meaning of these two terms.

Reliability is a measure of how consistently or how often identical results can be obtained with the same screening instrument. Thus, reliability is a measure of a test's "repeatability." Usually, two types of reliability are reported for screening instruments. In the Interobserver, or Scorer Reliability procedure, an examiner and observer each score the same performance, rendering two sets of scores for each administration. The reliability consists of the percentage of agreement between the two persons scoring the same results. In the Test-Retest or Test Stability procedure two different examiners administer the screening instrument to the same child during a time interval of approximately one week. The reliability score obtained in this fashion describes the stability of the instrument over time, as well as the percentage of agreement in results when the same child is screened by two different examiners.

Validity is a measure of an instrument's accuracy. A screening instrument which is valid is one that has a high frequency of agreement with the results of evaluation. There are three types of validity that can be reported. **Face Validity** refers to the concurrence of outside judges with the decisions rendered by a screening instrument. Face validity does not imply the administration of further evaluative instruments; it refers only to the professional judgment of others concerning the accuracy of the screening instrument. It is the most ambiguous measure of validity.

Concurrent Validity procedures utilize a technique that compares a child's score on a screening instrument with a score on another, related instrument. This related, or criterion instrument, must be administered in close temporal proximity to the screening instrument. Furthermore, the criterion instrument must be known to be valid and reliable. Validity would then be reported in terms of percentage of agreement and coefficient of correlation between the two tests.

Finally, **Predictive Validity** scores are obtained when screening results are compared with measures of children's performance taken at least a year later. These measures may take the form of school achievement test scores, ratings by observers or reports of teachers.

FOLLOW-UP EVALUATION

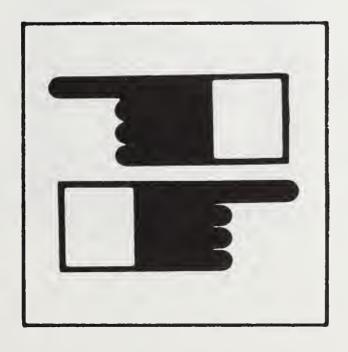
		CHILDREN WITH SPECIAL NEEDS	CHILDREN WITHOUT SPECIAL NEEDS
SCREENING	AT RISK: REFER FOR EVALUATION	а	b
PROGRAM	NOT AT RISK: DO NOT REFER	С	d

Figure 4. Test Validity.

Figure 4 graphically represents test validity. All children who are identified by the screening instrument as **at risk** of having learning problems and whose status is confirmed by follow-up evaluation, fall into quadrant **a.** Those children who are erroneously referred for evaluation fall into quadrant **b.** These children are technically called "false positives" or overreferrals. Those children who are **at risk**, but who are missed by the screening test, fall into quadrant **c.**. They are the "false negatives" or underreferrals of the screening. The largest proportion of children screened should fall into quadrant **d.** These children are functioning within the normal range of development.

It is important to recognize that validity is a relative measure. No screening instrument, by virtue of its brevity and generality, can be 100 per cent accurate. All test developers must constantly balance **b**, the measure of overreferrals, against **c**, the indicator of underreferrals. By adjusting the cutoff point between "OK" and "refer", a test's over- or underreferral rate will be altered. In most cases, it is preferable to err on the side of referring too many children, rather than overlooking children who require intervention.

If no measures of reliability and validity are available for a screening instrument, the results may be random or inaccurate. Given the potential human consequences of overreferral and underreferral, such a situation should be avoided whenever possible.



D. WHAT DECISIONS MUST BE MADE WHEN SELECTING A DEVELOPMENTAL SCREENING INSTRUMENT?

In selecting a screening instrument a variety of issues have to be considered and a number of specific decisions have to be made. For example:

- 1. Who will administer the instrument? Some instruments are designed to be administered by paraprofessionals, by teachers or by psychologists. Since subjective judgment usually plays a role in assessing a child's overall performance, it is important that whoever administers the screening has some understanding of and background in child development.
- 2. Will the instrument be individually administered, or will it be given to a group of children? Screening instruments should be administered to individual children. Although some items in a screening battery may lend themselves to a group approach, administering a screening instrument to a group will probably result in some children's problems not being detected.
- 3. **Is the instrument reliable and valid?** If the instrument is not known to be reliable and valid, the accuracy of the instrument is unknown. Unless a statistical study of the reliability and validity of the screening instrument has been undertaken, the results of the screening may be misleading.
- 4. Are normative scores available on a population similar to yours? Normative, or statistically standard scores, are necessary in order to establish cut-off points for referrals. Whenever possible, local communities should attempt to develop their own norms through systematically analyzing the patterns of passes and failures on each task of the screening battery.
- 5. How long will the screening take? Screening instruments should be brief. Twenty to thirty minutes is the usual time limit for screening a child.
- 6. How old are the children who are to be screened? Screening instruments are developed for specfic age ranges. Be certain that the children you wish to screen are included in the age range covered by your screening instrument.
- 7. Is the instrument available in more than one language, and is it fair to children from different cultures? Children who do not speak English as their primary language, or who have been raised in different cultures should not be penalized because of the limitations of the screening instrument.
- 8. Which developmental areas does the instrument cover? Some tests are designed to screen specific developmental areas such as speech, articulation, perceptual-motor, vision or hearing. Screening instruments should be sufficiently general to cover areas such as visual-motor performance, language, cognition, verbal reasoning, auditory memory, gross motor ability and body awareness.
- 9. Is the screening test experience pleasant for most children? Since the same test is given to a large number of children and since screening must be accomplished in a brief time period, it is necessary that the test items be enjoyable, easily understood and interesting enough so that a child's best performance can be elicited in the briefest period of time.

- 10. Is there a parent questionnaire? Many screening instruments include a parent questionnaire as part of the screening procedure. A parent knows a child better than anyone else; the parent is in the best position to provide a screening program with essential information about the child being screened. Questionnaires should be designed to elicit medical and developmental information in a simple, straightforward fashion. It is helpful for an examiner to see the completed questionnaire prior to screening the child in order to focus on areas of concern identified by the parent.
- 11. Is it difficult to learn how to administer the instrument? Screening instruments are usually administered to large numbers of children by a relatively large group of examiners. It should be possible to learn how to administer a screening instrument after studying the manual, watching an experienced examiner and practicing the administration, under supervision, with several children.
- 12. Is the instrument expensive, or does it utilize costly apparatus? In general, screening should be efficient and inexpensive. Most screening instruments require a modest expenditure for manuals and equipment, plus the cost of consumable supplies such as score sheets and parent questionnaires.
- 13. Are the screening procedures acceptable to the specialists who will be performing the follow-up evaluation? If the instrument is statistically valid and reliable, if the examiners are well trained and supervised, and if the focus of the screening test is broad enough to provide an overall picture of the child's functioning, the results of the instrument should be acceptable to the follow-up evaluation. If the results are not acceptable, the entire screening effort may be wasted.

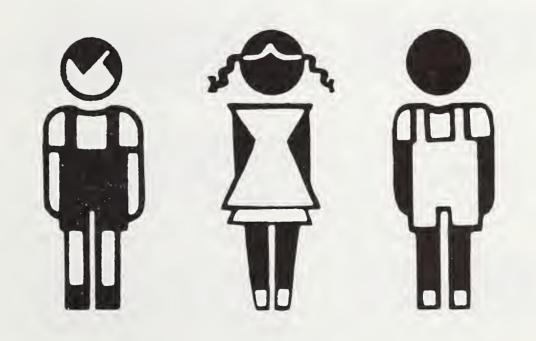
Many of these questions have been organized into a **Decision Matrix** which appears on the following page. This matrix is designed as a planning form to help examiners identify the parameters of screening instruments which they may wish to use with particular children.

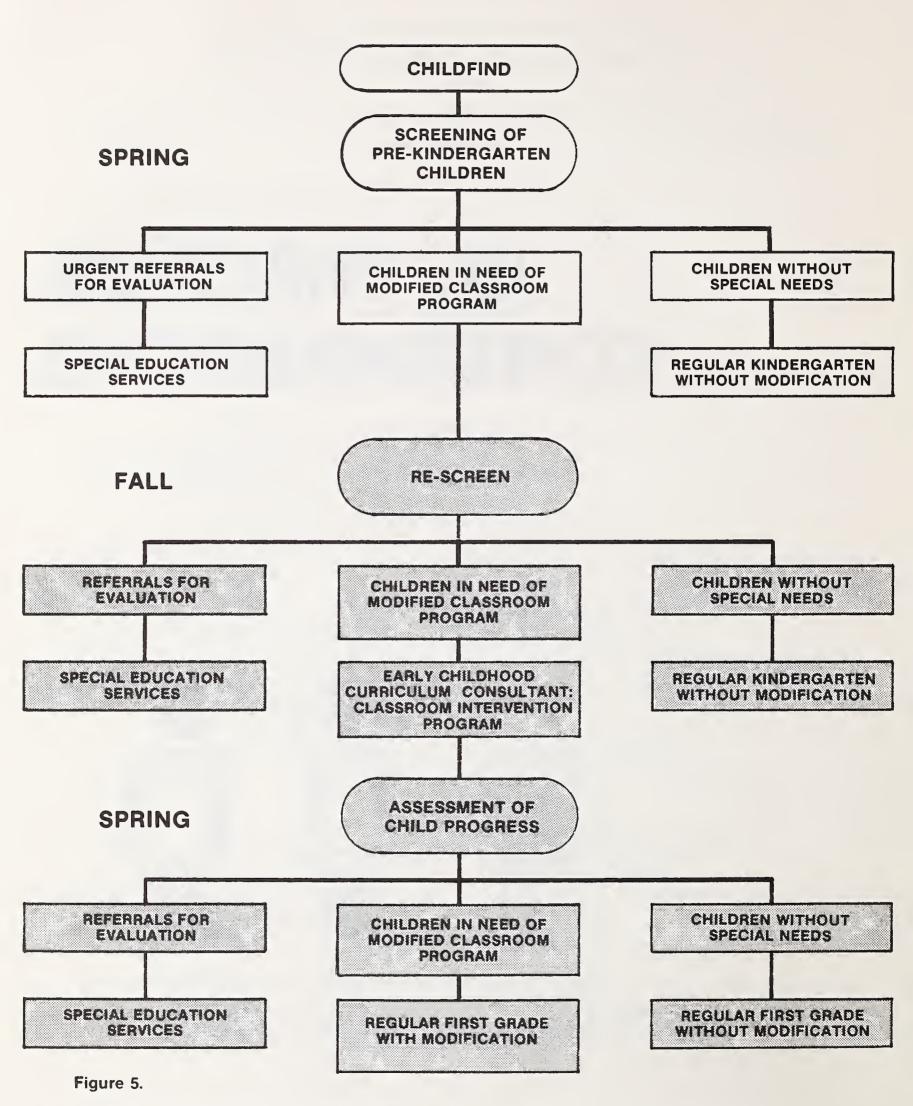


DECISION MATRIX FOR SELECTING AN EARLY CHILDHOOD DEVELOPMENTAL SCREENING INSTRUMENT

The personnel who should be av	vailable to administer the screening i	nstrument are:
☐ Teachers	☐ Specialists	☐ Paraprofessionals
The instrument will be administe	ered to:	
☐ Group Administered - more th☐ Individually Administered - or		
The age range of the children to	be screened is:	
The amount of time available for	the administration of the instrumen	t is:
Training materials for new exam	iners should consist of:	
□ No specialized materials or media necessary	☐ Audio-visual materials	☐ Programmed manual
The total expenditure for purcha	se of the instrument should be:	
☐ Minimal (less than \$10.)	☐ Moderate (up to \$50.)	☐ Whatever is necessar
The content area(s) to be covered	ed in the screening should include:	
☐ Auditory Reception☐ Visual Reception☐ Language Development	☐ Motor Development☐ Self Concept☐ Articulation	☐ Social Development☐ Concept Inventory☐ Behavior
The languages, other than Englis	sh, in which the instrument will be a	dministered are:
☐ Spanish	☐ Portuguese	☐ Other
The screening instrument should	d have the following statistical inform	nation available:
☐ Reliability - consistency of test☐ Validity - accuracy of test res☐ Norms - average scores on te	ults	
The instrument should have pro-	vision for parent input:	
	nation about the child's medical and tion about the child's developmental	· · · · · · · · · · · · · · · · · · ·

III. PRACTICAL CONSIDERATIONS





Developmental screening, intervention, and referral cycle for kindergarten-age children.

III. PRACTICAL CONSIDERATIONS

A. WHAT TYPE OF FOLLOW-UP AND PROGRAMMATIC DECISIONS CAN BE MADE ON THE BASIS OF SCREENING?

Typically, screening instruments yield two types of decisions: either a child is referred for further evaluation, or else (s)he is considered to be functioning within the normal range of development. However, this restricted choice between "refer" and "OK" is occasionally insufficient. Some children simply do not fit into these categories

Such children may have to be rescreened. The possible reasons for rescreening are numerous. For example, the parent may report that the child's behavior was atypical on the day of the screening, the child may have just recently recovered from an illness, (s)he may have done well on all but one section of a screening instrument, the location where the screening was done may suddenly have been disrupted, or his/her parent questionnaire may indicate a potentially serious problem that was not revealed in the screening.

All of these reasons constitute cause for rescreening a child whether the child is of preschool or of kindergarten age. However, when kindergarten screening is performed in the spring preceding the kindergarten year, a child who shows mild delays throughout his/her screening profile may be scheduled for rescreening in the fall. For the child who continues to display mild developmental delay after rescreening, it is sometimes advisable to initiate a classroom intervention program rather than subject the child to extensive evaluation (cf., Chapter 766, para. 314.0). Such a prescriptive decision should be made only when the following three conditions are met:

- 1. The child is rescreened and the second set of data corresponds to the initial screening information;
- 2. The child's classroom teacher is directly involved in the decision to initiate modified classroom programming;
- 3. The child's progress is monitored throughout the year, and is evaluated at the end of the first year of modified programming.

If the child does not show significant improvement in functioning in the course of the year, as attested by his/her teacher, parents and other data, the child should be referred for further evaluation. **Figure 5** provides an example of a cycle of pre-kindergarten developmental screening, intervention and referral.

It should be noted that the "rescreen" category is not a substitute for follow-up evaluation. Children who receive modified classroom programming on the basis of rescreening should not be labeled, nor should they be considered "children with special needs." Rather they are children who are apparently not developing in a typical fashion and who could probably benefit from some individualized educational attention. The decision to refer these children for further evaluation is thus delayed for a finite period of time. However, if any suspicion exists that the child may be substantially handicapped, he/she should be referred immediately for follow-up evaluation.

The actual plan for modifying the child's classroom program should be developed by the child's teacher with the assistance of an early childhood resource teacher. The child's parent should be informed of the decision to initiate modified programming and should be included in the planning process. In such a situation the data from screening can help to focus a teacher's observations and to organize his/her perceptions regarding a child, but are not intended to take the place of further informal, classroom-based assessment performed by the teacher.

Although the example given above is that of kindergarten intervention, the same procedures can be followed for three and four year old children who are enrolled in integrated or mainstreamed programs. As the number of such preschool programs increases, the usefulness of preschool screening information will be enhanced.

B. SHOULD PARENTS BE INCLUDED IN THE SCREENING PROCESS?

Parental involvement is critical to the success of an early childhood developmental screening program and is mandated by Chapter 766 and Public Law 94-142. This involvement is of two types: indirect and direct.

Indirect involvement begins when the parent is informed of the availability of screening services. Parents should be told what a screening program consists of, what its rationale is, how it fits into the program of the school system as a whole, who will perform the screening, where and when it will take place, how confidentiality will be respected and how results will be communicated. This information can be communicated via newspaper articles (**Appendix G**), PTA meetings or flyers distributed throughout the community. In general, the rights and the feelings of parents and children must be carefully guarded. For many families, screening represents a first-time-to-school experience. Long waiting lines, chaotic reception rooms and uninterested or unknowledgeable personnel should be avoided. Screening should take place in an environment that is high in respect and low in anxiety.

There is also an important role for direct participation by parents. Just as a parent would not expect to take a child to a pediatrician for a check-up without staying with his/her child, so the parent should not be expected to remain isolated from his/her child during the developmental screening. Parents should be asked to accompany their children to screening; during the actual screening, they can be told to sit near their child, but out of his/her direct line of vision. Although all parents should be invited to attend screening sessions, no parent should be required to observe his/her child's screening. In some cases, it is easier and less anxiety-provoking for parent and child to be separated for the actual screening. Discretion should be utilized by the examiner and the parent.

Parents are also involved directly in screening when they complete the developmental questionnaire (**Appendix F**). The questionnaire can provide both a history of medical and developmental milestones as well as a signal to the examiner of areas of development that may be problematic.

Finally, parents should receive direct feedback after the screening has been completed (**Appendix E**). Parents whose children are developing at the normal developmental rate should be informed of this in a prompt fashion. If a child is to be rescreened or referred for follow-up evaluation, the parent should be contacted personally. The feedback should not take the form of a "report card." Screening yields only tentative results and this fact should be reflected in communications to parents.



C. WHAT ARE SOME OF THE COSTS OF AN EARLY CHILDHOOD SCREENING PROGRAM?

Several types of expenses should be anticipated when planning a screening program. Included among these expenses are the following:

- 1. Finding children and publicizing the screening program. The community should be alerted to the availability of screening in a number of different ways. A letter and brochure sent home with all school children is useful, as are notices in local newspapers, public service announcements on radio and television, and posters placed in supermarkets and other community locations. These strategies are usually very inexpensive, yet highly effective. It is critical that this publicity be directed to all parents, not just those parents who suspect that their child might have special educational needs.
- 2. Purchasing the instrument. Enough copies of the manual and screening materials should be obtained so that each examiner has his/her own set. This cost is usually not very great, and should constitute an expense that does not have to be incurred annually. Copies of scoresheets and parent questionnaires will have to be purchased for each child who is to be screened each year.
- 3. Administering the instrument: Included in this item is the cost of training the screening personnel, the cost of personnel for actual administration and results of the program. The actual expense incurred will depend on the number of children to be screened, the number of examiners and the flexibility of the examiners' time.
- 4. Follow-up of the screening program: The costs involved in the follow-up of screening include recording the screening results; analyzing data; contacting parents with results (by phone or by mail); communicating with teachers and other school personnel; identifying those children who were absent for screening; locating children for rescreening; and setting up parent conferences for those children suspected of needing further evaluation.

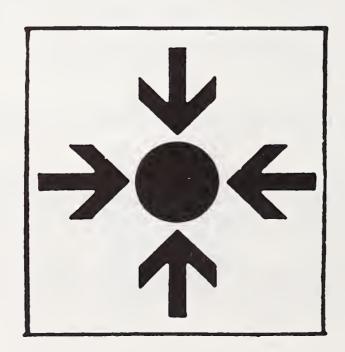
Although the actual cost of screening may not be very great per child, the obligations entailed by follow-up and by the provision of evaluation and intervention services renders screening the first step in a potentially expensive process. However, one of the fundamental assumptions of screening is that early identification and recognition of learning problems will, in many cases, lead to early remediation of disabilities. A cost-benefit analysis would therefore favor a greater expenditure at an early stage over the short run, rather than increasingly larger expenditures in later years.

D. WHAT ARE THE LIMITATIONS OF EARLY CHILDHOOD SCREENING INSTRUMENTS?

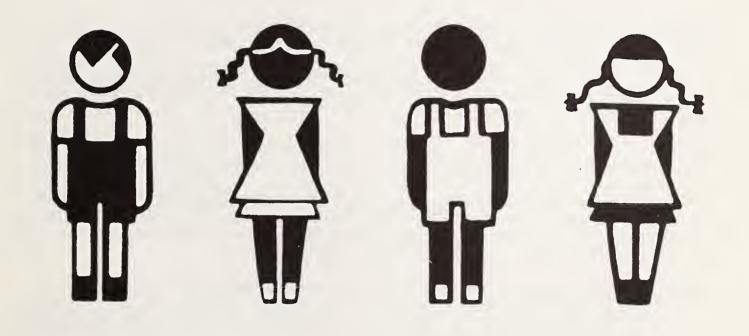
Screening instruments provide a limited amount of information concerning young children. It is important to consider the limitations of screening, so that the conclusions of a screening procedure not be distorted or misused. Many of the limitations, or potential abuses, of screening have been discussed earlier. By way of summary they can be restated as follows:

1. The data of screening should not be used as diagnostic/evaluative information: Screening only identifies potential high-risk learners; evaluation confirms or disconfirms this identification.

- A screening instrument is not the same thing as a school entrance test:
 Developmental screening instruments are designed to find out if a child has the
 ability to acquire skills. In general, school entry or readiness tests seek to find
 out whether a child has acquired a certain minimum set of skills and body of
 knowledge.
- 3. Screening tests are not the same thing as I.Q. tests. I.Q. tests and screening instruments are not intended to be used for the same purposes. Whereas I.Q. scores are frequently considered to be measures of a child's overall cognitive functioning, screening instruments do not presume to reflect a child's entire range of cognitive functioning. Often I.Q. tests are used in the evaluation component following screening. They should not be used as screening instruments.
- 4. Screening results should not be used to generate labels. Labels which refer to a child's intellectual, physical or emotional disabilities should be used only for well-defined purposes. No screening instrument is comprehensive enough to identify a child as having special needs. A screening test can organize information about a child for a teacher, but it should not be used for assigning diagnostic labels.
- 5. Screening instruments should not be used if they fail to recognize the importance of cultural differences or the effects of bilingualism. Whenever possible, bilingual children should be screened in their native language. When a community serves families from a number of different cultures, the screening instrument should not place those children at a disadvantage.
- 6. Screening should never be performed in isolation: it should always be performed within the context of a program of subsequent evaluation and intervention. When an agency or school system establishes a screening program, it is committing itself to a process that can lead to the early identification of learning problems. Thus, it is the moral and ethical responsibility of the school system to provide the follow-up evaluation and intervention services for those children who are identified by the process as being in need of special services. One must never lose sight of the overall context in which screening is performed.



IV. APPENDIXES



IV. APPENDIXES

A. ANNOTATED BIBLIOGRAPHY

Bradley, R.H. and Caldwell, B.M. *Issues and procedures in testing young children*. ERIC, TM Report 37, December, 1974

Presents a model of testing for the purposes of decision-making. Screening decisions are contrasted to decisions entailed by program planning, evaluation and administration. Suggests a number of practical criteria for selecting a good test.

Buros, O.K. (ed.), Seventh mental measurements yearbook. Highland Park, N.J.: Gryphon Press, 1972.

Systematic reviews of assessment instruments. Usually reliable evaluations of the data that are available and the claims which are made for a wide variety of measurement devices.

CEC Information Services and Publications, *Early Childhood-identification: a selective bibliography*. Reston, Va.: Council for Exceptional Children, Bibliography Series No. 606.

Extensive annotated bibliography of articles, symposia and books relating to early childhood screening and identification.

Coordinating Office for Regional Resource Centers (CORRC), *Preschool test matrix: individual test descriptions*. Lexington, Ky.: University of Kentucky, 1976.

Provides a quick reference tool for selecting assessment devices that can be used with preschool children. Includes a set of test descriptor forms which give detailed information about specific tests. Available now from ERIC (ED 129-041).

Cross, L., Identification of young children with handicaps: an overview, in Ellis, N.E. and Cross, L. (eds.), *Planning programs for early education of the handicapped*. New York: Walker, 1977.

Provides an excellent overview of the terminology, definitions and procedures used in assessment activities designed to identify young children with special needs. Places screening into context with other identification and assessment procedures.

Cross, L. and Goin, K., *Identifying handicapped children: a guide to casefinding, screening, diagnosis, assessment, and evaluation.* New York: Walker, 1977.

A clearly written handbook that discusses each type of identification process separately. Includes a comprehensive bibliography of screening, diagnostic and assessment instruments.

Devoid, R.R., Hodson, W.A., Schubert, A., Screening pre-school children: design and implementation. Brattleboro, Vt.: Winston Prouty Center for Child Development, 1975.

Gives the rationale for preschool screening and describes a model which is based on several "stations" where specific evaluations are performed. A longitudinal study of the results derived from this screening model is briefly described. The screening battery is very "readiness" oriented.

Divoky, D., Screening: the grand delusion. Learning Magazine, 1977, 5 (7), 28-34.

A polemical attack on screening. Useful because it identifies all of the potential abuses of screening. Does not consider the rationale for screening or any possible benefits of screening.

Frankenburg, W.K. and Camp, B.W. (eds.), *Pediatric screening tests*. Springfield: Charles C. Thomas, 1975.

A comprehensive collection that reviews screening procedures for physical problems, sensory processes and psychopathology. Contains excellent methodological chapters on principles in selecting diseases for screening and on criteria for screening test selection. The orientation is almost exclusively medical.

Frankenburg, W.K., Increasing the lead time for the preschool aged handicapped child, in Jordan, J.B. and Dailey, R.F. (eds.), *Not all little wagons are red: the exceptional child's early years*. Reston, Va.: Council for Exceptional Children, 1973.

A clear presentation of the rationale for early childhood screening. Suggests criteria for the selection of screening tests and principles for evaluating the overall effectiveness of a screening program.

Gallagher, J.J. and Bradley, R.H., Early identification of developmental difficulties. In Gordon, I.J., *Early childhood education*, the seventy-first yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press, 1972.

Discusses the relative usefulness of evaluation instruments in the early identification of developmental difficulties. Suggests a number of standards which should be used in evaluating assessment instruments.

Hale, F. and Juster, D., A first look: how to plan and implement preschool screening. Cumberland, Maine: Project Maine Stream, 1977.

An illustrated manual that describes how to implement a preschool screening program and how to follow through with an educational program.

Holliday, F.B. and Olswang, L.B. School-community program in early childhood development. Evanston, III.: Evanston Public School System, 1974.

Presents a comprehensive approach to screening in which children are evaluated at separate stations. Details are provided on evaluation, intervention and follow-up reporting to parents.

Meier, John, Screening and assessment of young children at developmental risk. Washington, D.C.: The President's Committee on Mental Retardation, 1973.

A "state of the art" monograph which presents the current thinking concerning research and operational methods for the early screening of young children who either already have various developmental disorders or are at considerable risk of having them later. Covers screening of all factors in development.

Thorpe, H.S. and Werner, E.E., Developmental screening of preschool children: a critical review of inventories used in health and educational programs. *Pediatrics*, 1974, 53 (3), 362-370.

Five developmental screening inventories that are currently being used in health and educational programs are compared on relevant technical and practical criteria. Suggests the continuing need for carefully conducted longitudinal studies in order to assess predictive abilities of screening tests.

Walker, D.B., Socioemotional measures for preschool and kindergarten children. San Francisco: Jossey-Bass, 1973.

A comprehensive handbook that reviews all socioemotional measures available for use with children aged three to six (as of 1973). Also includes a state of the art review of present socioemotional measurement technology for young children.

Zehrbach, R.R., Determining a preschool handicapped population. *Exceptional Children, 1975, 42 (2), 76-83.*

Describes a comprehensive identification process for locating, screening and evaluating young handicapped children. Problems in implementing a mass screening program are discussed.

Zeitlin, S., Kindergarten screening: early identification of high-risk learners. Springfield: Charles C. Thomas, 1976.

Discusses the rationale for screening, procedures for developing a screening program and the inherent problems of screening. A number of screening programs and screening instruments are described. Includes a screening instrument developed by the author.

B. WHAT CHAPTER 766 SAYS ABOUT SCREENING

Although Public Law 94-142 does not contain regulations concerning screening, Chapter 766, the Massachusetts comprehensive special education law, devotes a great deal of attention to early childhood screening. The regulations for Chapter 766 require that all three and four year old children as well as all kindergarten-aged children are to be screened. Although screening is optional on the part of parents until the child reaches kindergarten age, parents should be informed that little is gained by denying the services of a screening program to any child younger than kindergarten age. The rationale for developmental screening programs — that long-term learning disorders are often preventable if identified at an early age — is only realized when as many three, four and five year old children as possible participate in screening.

Chapter 766 specifically requires that the following protocol be followed with all children who receive screening:

- 1. A complete physical status assessment including testing of hearing and vision;
- 2. An assessment in practical tasks and activities of visual, auditory and motor functioning, separately and in integration;
- 3. An assessment of language functioning, including comprehension, expressive abilities, maturity of articulation and grammatical and conceptual development in the English language, and the child's primary language if other than English;
- 4. An assessment of cognitive functioning, including learning style and ability to attend to, concentrate upon and complete both verbal and non-verbal tasks;
- 5. An assessment of social-emotional behavioral functioning including patterns of interaction with adults, with peers and degree of confidence, persistence, attentional features and impulse control;
- 6. A solicitation of information from parents about the child regarding possible special needs, previous screening, evaluation, previous placement in a special education or treatment program;
- 7. Provision of inservice training for all teachers.

Although the law provides for continuous screening for children who enter school late or who are referred for other reasons, screening for kindergarten-age children should be completed no later than October 31 of the child's kindergarten year. A chart comparing the screening services offered to three and four year olds and to kindergarten-age children follows.



SCREENING PROGRAM ACTIVITY	three and four year old children	kindergarten-age children
Information about the purpose of screening and the		
availability of orientation sessions to be publicized to parents.	yes	yes
Annual or more frequent parent workshops	yes	yes
Parental consent required	yes	no
Comprehensive physical status assessment	yes*	yes
Vision and hearing testing	yes*	yes
Assessment in practical tasks of visual, auditory and motor functioning.	yes*	yes
Assessment of language functioning	yes*	yes
Assessment of cognitive functioning	yes*	yes
Assessment of social-emotional behavioral functioning	yes*	yes
Solicitation of information from parents	yes*	yes
Solicitation of information from teachers.	if possible	yes
Provision of in-school training for all teachers	yes	yes
Follow-up report to parents, to school department, and to classroom teacher.	yes	yes

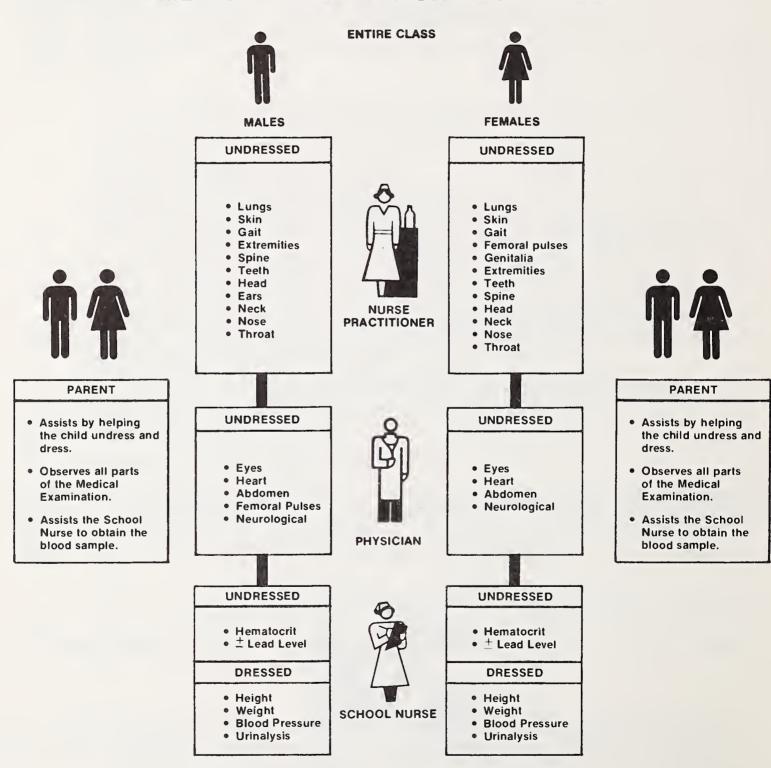
Comparison of services and activities to be performed by an early screening program for three and four year olds and for kindergarten-age children.

^{*}Screening services should be provided to all three- and four-year olds and parents should be encouraged to have their children receive screening since the objectives of developmental screening programs are only fully realized when as many three-and four-olds as possible participate in screening.

C. SAMPLE FLOW CHART FOR CONDUCTING PHYSICAL EXAMINATIONS

Physical examinations should be given by trained medical personnel in conformity with the regulations of the Department of Public Health. The data obtained from the physical examination should be compared with the information acquired in the developmental screening, vision and hearing testing and the responses given in the parent questionnaire. Although most children receive a physical examination from their private physician, the diagram on the following page shows a flow chart for designing a school-based physical examination that utilizes a physician, a nurse practitioner and a school nurse. This format also encourages the participation of the child's parent. Note that the opportunity to assess blood lead levels is combined with the examination.

MEDICAL EXAMINATION FLOW SHEET



D. VISION AND HEARING SCREENING

Problems associated with vision and hearing impairment can lead to significant academic and social problems. A variety of techniques for vision and hearing screening exist. It is absolutely essential that this screening be performed in conjunction with the developmental screening and the physical examination. When all of this information has been collected and has been compared to the parent's response on the parent questionnaire, then the decision as to whether or not to recommend further evaluation can be made with confidence.

The Massachusetts Department of Public Health provides standards and training for vision and hearing screening.

1. Vision Screening

Typically, vision screening addresses itself to three types of eye problems:

- a. Amblyopia, i.e., impaired vision in one eye due to lack of use;
- b. Refractive errors, i.e., impaired vision due to lack of clear focusing; and
- c. Strabismus, i.e., impaired vision due to non-straight, crossed or wall eyes.

The American Academy of Pediatrics committee on children with handicaps suggests referral for three-year-olds with vision of 20/50 or less and four or five-year-olds with vision of 20/40 or less. These criteria are in agreement with the recommendations of the National Society for the Prevention of Blindness.

Many screening tests of visual acuity are available. In general, vision screening tests fall into one of three categories: toys and picture cards for children below three years of age, the wall chart, and vision testing machines for somewhat older children.

The standard measure of visual acuity (which also screens for amblyopia) is the Snellen letter or the Illiterate **E** test. This test measures central visual acuity at a distance of twenty feet. The test incorporates all the features of the Snellen letter; however, it uses only one letter, **E**, in different positions. The Illiterate **E** test is designed for the younger child who is unfamiliar with the alphabet. In this test the child is asked to indicate the different positions of the letter **E** presented to him/her. (S)he may also be asked to indicate by verbal response or gestures which direction the legs or "fingers" of the **E** are pointing.

Vision screening is relatively difficult to perform with high validity. Although the Snellen letters or the Illiterate **E** are considered standard measurements of visual acuity, not all children have enough knowledge of the letters of the alphabet or the ability to indicate directions to execute these tests satisfactorily. Similarly, most preschool aged children have difficulty in looking into stereoscopic machines. On the other hand, grosser tests of visual acuity, such as picture cards, toys and graduated balls (e.g., STYCAR)may be used to evaluate those children who are unable to perform the more complex tests. Most preschool age children benefit from practice testing with their parents before they receive the actual screening test.

⁽Material in this section is derived from Barker, J. and Barmatz, H., Eye function, in Frankenburg, W.K. and Camp, B.W. (eds.), **Pediatric Screening Tests.** Springfield: Charles C. Thomas, 1975.)

2. Screening of Hearing Function

Three procedures are typically used in the screening of young children for hearing problems:

- a. Screening for hearing function (audiometer);
- b. Screening for ear disease (otoscopy);
- c. Screening for ear function (tympanometer).

External Canal:

The most common form of hearing screening is the audiometric, or pure tone screening. Most four and five year old children and some three year old children can be tested by this method. Children are instructed to raise a finger or drop a token in a box when they hear a tone. Testing is done for response at 20 dB at 1,000, 2,000 and 4,000 Hz (or 3,000 Hz).

Screening for ear disease, or otoscopy, is typically performed by medical personnel. The following is examined:

External Ear Normal

Abnormal Painful

Open

, airii

Obstructed

Tympanic Membrane: Normal

Abnormal

Pneumatic Otoscopy: (can be omitted if

tympanometry is done)

Normal Mobility Abnormal Mobility

Screening for ear function by impedance is performed with a tympanometer. Testing is for acoustic reflex. Reflex should be present at 100 dB HL at 1,000 Hz (include 500 Hz and 2,000 Hz if pure tone screening is not performed).

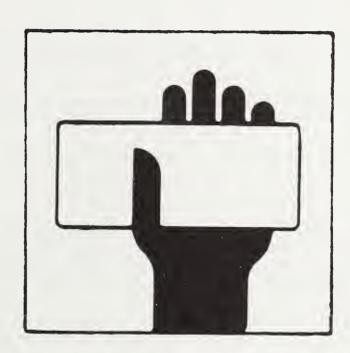
In general, all children with signs and symptoms of ear disease should be referred for medical care. The most common cause of temporary hearing loss in young children is fluid in the middle ear (serous otitis media) that is brought about by the common cold. Children with colds should be screened for hearing when they are no longer symptomatic. All children who fail the hearing screening should be rescreened; all those who fail the second screening should be referred for detailed audiological evaluation.

⁽Information in this section was derived from material collected by Marion P. Downs, University of Colorado Medical Center, Denver, Colorado.)

E. FEEDBACK TO PARENTS FOLLOWING SCREENING

Feedback to parents concerning the results of screening typically takes a number of different forms. Parents of children who are referred for further evaluation should receive a personal contact (home visit or telephone call) although contact through the mail is acceptable. The parents of children who are to be rescreened or who need no further evaluation may be communicated with by mail or telephone. These communications should be in the parent's primary language, if more than one language is spoken in the home. For parents who are illiterate and/or who do not have telephone service, a personal visit will be required.

An example of one type of parent feedback letter follows. This letter can be used for children who pass the screening as well as for those children who will have to be rescreened.



SAMPLE PARENT FEEDBACK LETTER Date_ Dear Parent of ____ The Early Screening Program staff of the Department of Special Education Services has recently seen your child for developmental screening. The developmental screening included a brief check of your child's eye-hand coordination, language skills, reasoning abilities, and muscle control. This letter tells you of the findings of the screening procedure. Only the paragraphs below which are checked apply to your child. If you have any questions or want to discuss the developmental screening, please call (person's name and telephone number) The screening indicated that your child appears to be developing normally in all the areas mentioned above. The screening indicated that your child's development may be a bit behind other children the same age in the area(s) checked below. Eye-hand coordination: The child may benefit from the chance to play with crayons, puzzles or blocks. Language: The child may benefit from any experience with language such as listening to and speaking in full sentences, having books read to him/her. Large muscle coordination: The child may benefit from any activity using his/her whole body such as playing outside or climbing on playground equipment. Other: As you know all children grow faster in some areas and slower in others. Many children will outgrow a delay in a few months. For this reason we do not recommend further evaluation at this time. Instead, unless you object, we plan to repeat the developmental screening in a few months. We will let you know then if we recommend a more thorough evaluation. Sincerely yours,

F. SAMPLE PARENT QUESTIONNAIRE

A number of sample parent questionnaires can be obtained by reviewing the screening instruments described in the following section (**Appendix G**). The parent questionnaire which is included in this section is intended to display the type of information typically asked of parents. If possible, questionnaires should be completed before a child is screened so that the examiner can use the parent's responses as a signal to identify areas of concern in a child's development.

SOMERVILLE EARLY SCREENING PROGRAM SOMERVILLE PUBLIC SCHOOLS 81 Highland Avenue

Somerville, Massachusetts 02143

Dear Parent:

We would like you to help us learn more about your child. The questions below concern your child's everyday behavior and his medical history. You know your child best so your careful answer to each question will be an important help to us. Please respond only to those questions which you are comfortable answering.

Please complete this questionnaire as soon as possible and return it to us. If you have any questions, please feel free to call the Early Screening Program at 666-5700, Ext. 323 or 324.

Se quizrem uma copia deste questionário em portugues, chame, por favor, o número, 666-5700, Ext. 323, 324.

Si usted quiere una copia deste questionario in castellano, llame, por favor el numero, 666-5700, Ext. 323, 324.

	Today's date	e	
Name of child			
Where does/will your child go to kindergarten?			
Does your child attend school now ? If so, where?			
FAMILY			
Who is filling out this questionnaire? Father	Mother Other		
Address	Phone _		
When can you best be reached by phone?			
Father's name	Date of Birth _		
Occupation	Years of school completed _		
Mother's name	Date of Birth Years of school completed Ages of child's sisters		
Occupation			
Ages of child's brothers			
Language(s) other than English regularly spoken	in the home		
Do any of your children have difficulty in school?	If yes, please give:		
Child's Name Age	Nature of Difficulty		
SCHOOL HISTORY (include preschool, nursery s	chool, Head Start, etc.)		
Has child attended school before? Yes□ No□ If yes, name school(s)			
Dates of attendance: from			
Numbers of days per week: 1 day ☐ 2 days ☐ 3 d			

May we contact the school(s)? Yes □ No □

CHILD'S MEDICAL HISTORY

		PRENATAL				
		 a. When you were pregnant with this child, die Excessive weight gain - more than 25 pound Bleeding or spotting High blood pressure Measles, mumps, chickenpox b. Did you go into labor by yourself c. Did your labor last longer than 24 hours d. Method of delivery: 	•	have:		
		Baby came out by itself	- (++	C	-41	
		Was it head first or breech 2. Forceps delivery 3. Cesarean delivery If Cesarean, give reasons:	·			
YES		NEONATAL a. Was your child premature				
		b. Baby's weight (birth)	· · · · · · · · · · · · · · · · · · ·			
		 c. Was oxygen required for the baby d. Did baby cry immediately when born e. During hospital stay, did baby have yellow f. Did the baby stay longer than you in the hog. g. Did baby have difficulty with sucking or cry 	spital			
		CHILDHOOD DISEASES			,	
		a. Has your child had: Measles Mumps Chickenpox German Measles Whooping Cough	YES	NO	Scarlet Fever Rheumatic Fever Roseola Polio	
		b. Has your child had any allergies				
		Asthma	_	_		
		Hay Fever Hives			Wheezing Reaction to Penicillin	
		Eczema			Rashes	
		c. Has your child ever stayed in a hospital over When Where	ernight	?	Why	
VEC	NO	FAMILY HISTORY	•			
YES		a. Do any family members have long-term illner	esses	of birth	n defects	
		b. Do any other illnesses run in the blood-rela	ted fai			
		c. Have any of your children who were born a			•	

SYSTEMIC REVIEW

The questions below pertain to your child at any time since birth.

YES	NO	EYES
		Has your child ever had any trouble seeing?
		Have your child's eyes ever looked crossed?
		EARS
		Has your child ever had frequent ear infections?
		·
		Has your child had any trouble hearing?
		NOSE
		Has your child had frequent nose bleeds?
		Does your child sneeze frequently or rub his nose a lot?
		THROAT:
		Has your child had any trouble swallowing?
		·
		Has your child had frequent sore throats or strep throats?
		HEART
		Has a heart murmur ever been heard on your child?
		Has your child ever had a "blue spell", swollen ankles or joints?
		LUNGS
		Has your child ever had:
		pneumonia
		·
		tuberculosis
		or been exposed to tuberculosis
		Does your child cough up blood?
		ABDOMEN
		Has your child ever had:
		Yellow jaundice
		Frequent stomach pains
		·
		Marked weight loss
		Blood in bowel movements
		Frequent vomiting or diarrhea
		Black bowel movements
		URINARY TRACT
		Does your child have any pain or burning when urinating?
		Does your child wet the bed at night?
	_	EXTREMITIES
		Has your child ever worn braces or corrective shoes?
		Has your child ever had weakness, limp or paralysis of arms or legs?
		Has your child ever broken a bone?
		NEUROLOGICAL
		Has your child ever had:
		Frequent headaches
		Dizzy spells
		Fainting or blackout spells
		· ·
ч		Fits or convulsions
		At what age did your child first:
		Sit alone
		Walk
		Toilet trained
		Say single words
		Say sentences

CHILD'S DEVELOPMENTAL HISTORY

		ow 1.	Can your child: a. use a spoon and fork to eat without spilling a lot? b. wash and dry his/her own hands? c. dress himself/herself? d. do buttons? e. be left alone with a babysitter without a big fuss?
		2.	Does your child have: a. problems with eating? b. problems with sleeping?
= C		3.	Does your child still soil his/her pants?
			Does your child: a. play with other children?b. like to play games like tag, cops and robbers, and hide-and-seek with other children?c. play alone without adult supervision? Does your child:
		0.	 a. play successfully with puzzles, blocks and other construction toys without help? b. write and draw rather than scribble? c. hold a pencil properly? d. prefer right hand, left hand, or both? Right Right Both Both
		6.	Can your child: a. ride a tricycle? b. throw and catch a ball?
		7.	Does your child: a. have many accidents? b. drop things more often than other children of the same age? c. trip easily? d. run into things? e. have trouble with stairs?
		8.	Is your child: a. highly active? b. very quiet? c. generally a happy child?
		9.	Does your child: a. cry easily? b. often have temper tantrums?
		10.	Does your child: a. usually follow directions? b. have a very short attention span?
			Is your child: a. able to speak most sounds correctly? b. afraid to speak? c. understandable by a person unfamiliar with his or her speech? Did your child speak later than other children you know?
		13.	Does your child often repeat sounds or words (stutter or stammer)?
			Does your child: a. turn on the TV at a very high volume? b. say, "What, what?" all the time? c. sit very close to the TV screen? d. bend over and look very closely at pictures or what he/she is drawing?

lf	there is anything further you wish to mention about your child, please use this page.				
	(Do you want this form returned to you or kept in the child's record at school?)				
	•				



G. EXAMPLES OF LOCAL NEWSPAPER ARTICLES PUBLICIZING THE AVAILABILITY OF SCREENING PROGRAMS

THURSDAY, NOVEMBER 11, 1976

SOMERVILLE JOURNAL

Screening now underway for kids 3-4

The Somerville Early Screeening Program, which operates in the Somerville Public Schools, provides developmental screening for young children. This service has been offered to Somerville families since 1974, in order to identify kindergarten children who may need extra help at school. In addition, the Early Screening Program will gladly see younger children, three and four year olds who will be able to start kindergarten in 1977 or 1978.

Developmental screening is a brief check of a child's eye-hand coordination, language abilities and large m otor control. Most children develop in these areas at a rate which is within the usual range for their age. For some children the developmental screening may indicate that more information about the child's abilities would be helpful.

The Early Screening Program will consult with all parents about the results of developmental screening and assist them in obtaining other services for their children.

Those who wish to find out more about the Early Screening Program are asked to call right away. The staff is available in the next few weeks to see young children for developmental screening. Call at 666 5700, ext. 323.

THURSDAY, MARCH 3, 1977

SOMERVILLE (MASS.) JOURNAL

Have someone heading to kindergarten next year?

Is your child going to attend a Somerville kindergarten next fall?

Informational meetings for parents of children who will enter public kindergartens in September have been scheduled for two elementary schools by the city's Early Screening Program.

Meetings will be held at the Cutler School Tuesday, March 8, and at the Winter Hill School Tuesday, March 15, both at 1:30 pm. They are open to all interested parents regar: lless of which kindergarten the child will attend.

Stone Wiske, Early Screening Program coordinator, will discuss the services provided by the program and will answer questions. Both the elementary principals and the various PTA groups have been working very closely with the Early

Screening Program.

Children entering kindergarten in September must be five (5) years of age by December 31, 1977. Registration for kindergarten will be conducted in each public school the week of March 28.

"Developmental screening will take place in every school during the months of April and May," explained Wiske." A schedule of dates and times will be publicized sometime in March.

"This screening includes a brief interview with parent and child, and a check of the child's development in eye-hand coordination, large muscle control, and language. It is an attempt to identify children who may have special educational needs, and is required for all kindergarten children," Wiske added.

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H. A SELECTION OF SCREENING INSTRUMENTS

In recent years, many instruments have been developed and made available for the purposes of early childhood screening. However, very few of these instruments are developmental in orientation; still fewer meet the selection criteria that have been detailed in this guide. The instruments that are described in this section are developmental instruments (not school readiness tests or intelligence tests) that approach or satisfy most of these criteria. Only a brief description of each instrument is provided. For more extensive information, a study of the screening manual, score sheets and materials is strongly recommended. Inclusion of an instrument in this section does not constitute an endorsement of that instrument by the Massachusetts Division of Special Education.

NAME:	Comprehensive Identification Process (CIP)
AUTHOR:	R. Reid Zehrbach
PURPOSE:	A screening process developed for the early identification of children with problems that might handicap them in formal education.
AGE RANGE:	Children aged two and a half to five and a half.
HOW ADMINISTERED:	Administered to individual children at three screening stations in a team approach.
WHO ADMINISTERS:	Professionals, paraprofessionals, volunteers and students.
TIME TO ADMINISTER:	30 minutes
SUBTESTS:	The CIP assesses a child's behavior in the following areas: cognitive-verbal, fine motor, gross motor, speech and expressive language, hearing, vision and socio-affective development.
PARENT QUESTIONNAIRE:	A questionnaire concerning a child's medical history is included.
TRAINING:	Screeners can usually be trained in a three-to-four-hour training session. Study of the manual and materials is central to the training session. A filmstrip for use in the training workshop is available.
STANDARDIZATION, RELIABILITY, & VALIDITY:	No standardization or reliability data are available. Validity is based strictly on content measures.
AVAILABILITY:	Scholastic Testing Service,Inc. 480 Meyer Road Bensenville, Illinois 60106
COST:	Screening kit (including materials, manual and 35 record forms) \$54.50

NAME:	Denver Developmental Screening Test (DDST)	
AUTHOR:	W.K. Frankenburg and J.B. Dodds	
PURPOSE:	A screening device which yields an overall developmental profile; can be used for the detection of developmental delays during infancy and the preschool years.	
AGE RANGE:	Infants two weeks old to children 6 years 4 months of age.	
HOW ADMINISTERED:	Administered to individual children	
WHO ADMINISTERS:	Paraprofessionals, teachers, clinicians.	
TIME TO ADMINISTER:	Approximately 20 minutes	
SUBTESTS:	The test covers gross motor, language, fine motor/adaptive and personal-social skills.	
PARENT QUESTIONNAIRE:	RE: No parent questionnaire is available.	
TRAINING:	Training time varies from a few hours to several days, depending on experience, level of formal education, age range of children to be screened and availability of children for demonstration and trial evaluation. A programmed manual has been developed and several training films are available on a rental basis.	
STANDARDIZATION, RELIABILITY, & VALIDITY:	Although the Denver has been criticized for being standardized on a mostly middle-class, Caucasian population, it is one of the most carefully researched and documented instruments of its type. Data are available in the appendix of the manual.	
AVAILABILITY:	LADOCA Publishing Foundation E. 51st Avenue and Lincoln Street Denver, Colorado 80216	
COST:	Manual-\$6.00 Materials-\$7.00 Test forms-\$2.00 (100)	

NAME:	Eliot-Pearson Screening Inventory (EPSI)	
AUTHOR:	Samuel J. Meisels and M. Stone Wiske	
PURPOSE:	A screening test designed to provide a brief and easily administered survey of children's development in a number of significant areas. The instrument provides a profile of a child's developmental abilities, in addition to a standardized score.	
AGE RANGE:	Children 4 to 6 years of age.	
HOW ADMINISTERED:	Administered to inidvidual children.	
WHO ADMINISTERS:	Teachers and other professionals and students of child development.	
TIME TO ADMINISTER:	15-20 minutes.	
SUBTESTS: The instrument requires children to complete a D Person figure and contains items that examine the fol areas: visual-motor/adaptive; language and cognitio gross motor and body awareness.		
PARENT QUESTIONNAIRE:	A parent questionnaire (medical and developmental history) is included.	
TRAINING:	Training involves observation of an experienced examiner administering the instrument, study of the manual, and practice under supervision with two or three children. A training videotape is available.	
STANDARDIZATION, RELIABILITY, & VALIDITY:	Preliminary standardization, reliability and validity data are available; an extensive research program of concurrent and predictive validity testing has been completed. Face validity has been established with more than 3,000 children.	
AVAILABILITY:	Samuel J. Meisels Eliot-Pearson Department of Child Study Tufts University 105 College Ave. Medford, Mass. 02155	
COST:	Manual \$2.50 Score Sheet (100) \$1.50 Parent Questionnaires (100) \$2.50	

NAME:	Preschool Screening System (PSS)
AUTHOR:	Peter K. Hainsworth and Marian L. Hainsworth
PURPOSE:	A screening test of "learning efficiency" designed as a first step toward recognizing and responding to the special learning needs of preschool or entering school children. Additional materials in the system provide follow-up classroom observation and adaptation techniques.
AGE RANGE:	Children two and a half to six years of age.
HOW ADMINISTERED:	Administered to individual children; a group format of individual and small group assessment is also available.
WHO ADMINISTERS:	Specialist or teacher, volunteer under supervision.
TIME TO ADMINISTER:	15 to 20 minutes; small group format asesses 8 children (with 4 adults) in one hour.
SUBTESTS:	The instrument surveys information-processing skills in language, visual-motor and gross motor areas, as well as two supplementary tasks: Draw-A-Person and Verbal Reasoning.
PARENT QUESTIONNAIRE:	A parent questionnaire is included. It provides norms for Behavioral Characteristics (the child's skills as the parent sees them), Medical History, and Developmental History.
TRAINING:	Training involves study of the manual, observation of a trained examiner and several practice experiences under supervision. A training videotape is available.
STANDARDIZATION, RELIABILITY, & VALIDITY:	Standardization, reliability and validity data are available for the 4-4 to 5-4 age range. Norms for the two and a half to four and a half range are available. A Spanish PSS is being field tested.
AVAILABILITY:	Preschool Screening System P.O. Box 1635 Pawtucket, R.I. 02862
COST:	Manual \$8.00 Record Forms (100) \$8.00 Parent Questionnaire (100) \$12.00









